Tripp Lite
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# SmartOnline 100kVA Modular 3-Phase UPS System, On-line Double-Conversion International UPS

MODEL NUMBER: **SU100KX2**

### Highlights

- 100kVA / 100,000VA / 80,000W on-line double-conversion 3 phase UPS
- 3 phase 220/380V, 230/400V, 240/415V 4-wire + ground wye input & output
- Scalable design grows as your datacenter grows
- Modular N+1 redundant architecture helps assure 100% availability
- Parallel up to 4 UPS systems for redundancy or increased capacity
- IGBT & DSP technology produce <4% input harmonic distiortion (THDi)
- Hot swappable power modules, Expandable runtime

### Package Includes

- SU100KX2 UPS System
- PowerAlert Software
- Parallel communication cable
- Instruction manual
- Warranty information

### Description

Tripp Lite SU100KX2 100kVA SmartOnline Modular 3-Phase Intelligent, True On-Line Double-Conversion UPS System provides 100% system availability with N+1 modular architecture and parallel capability. In N+1 configurations, SU100KX2 provides 5 self-contained, redundant 20kVA power modules that support hot-swappable maintenance as connected equipment remains powered. One open slot for up to one additional 20kVA power module offers increased capacity upgrades to 120kVA. In parallel applications, configured and installed by a Tripp Lite authorized technician, up to 4 SU100KX2 models can be connected to provide fail-safe redundancy (two 100kVA models supporting up to 100kVA total load) or increased capacity (two 100kVA models supporting up to 200kVA total load). Large capacity 100,000VA / 80,000W UPS continually converts incoming AC power into filtered DC and resynthesizes output into perfectly regulated continuous sine wave AC output with less than 3% THD. Zero transfer time assures compatibility with all equipment types. High input power factor, advanced IGBT inverter and Digital Signal Processor (DSP) technology produce less than 4% input total harmonic distortion (THDi). With low THDi, generators run cooler and last longer, allowing managers to save installation costs by installing a generator with a capacity equal to the equipment load (1:1 ratio). Up to 97% efficiency in optional economy mode reduces operating costs and BTU output. Hardwire input and output connections support a variety of permanent or PDU power connections. Frequency is 50 or 60 Hz (auto-selectable). SU100KX2 power modules are housed in a single small-footprint tower compartment. Compatible battery pack models BP480V55, BP480V78, BP480V103 and BP480V140 (sold separately) are housed in a separate stand-alone hardwired external battery compartment. Battery runtime can be extended with additional stand-alone hardwired external battery modules. A manual bypass breaker and an automatic bypass function ensure 100% availability of connected equipment by safely passing through AC power if the UPS requires maintenance.

### Features

- True On-Line Double-Conversion 100kVA / 100,000VA / 80kW / 80,000 watt SmartOnline Modular 3-Phase Intelligent UPS provides 100% system availability
- Scalable, modular N+1 configurations support hot-swap replacement of any of the six self-contained 20kVA power modules while connected equipment remains powered
- One open slot accommodates up to one additional 20kVA power module for increased capacity up to 120kVA
- Parallel applications enable the connection of 2, 3 or 4 SU100KX2 models in parallel to enable advanced configurations for fail-safe redundancy,

increased capacity and combinations of the two (all parallel installations must be performed by a Tripp Lite authorized technician)

- Full-time sine wave output with less than 3% output THD
- High input power factor, advanced IGBT inverter technology and Digital Signal Processor (DSP) technology produce low input THD (THDi)
- Less than 4% input THD (THDi) reduces installation costs by allowing 1:1 generator sizing
- Extremely efficient operation (up to 97%) saves energy and reduces BTU output
- Maintains continuous operation with zero transfer time through blackouts, voltage fluctuations and surges
- Removes harmonic distortion, electrical impulses, frequency variations and other hard-to-solve power problems
- Wide input voltage correction range: 173-300V / 276-477V AC
- Precision +/-1% output voltage regulation
- 4 available battery modules (BP480V55, BP480V78, BP480V103 and BP480V140) are housed in a separate, stand-alone hardwired external battery compartment (Battery modules sold separately)
- Front panel combination LCD/LED display includes a real-time event log screen with up to 500 events listed
- Dynamic battery management screen optimizes battery function to lengthen service life and allow cold restart of the UPS
- Built-in RS-232 communication port works with included PowerAlert Software to provide shutdown commands and reporting on a single server
- Accessory slot accepts an optional internal SNMPWEBCARD and MODBUSCARD accessory options
- Emergency Power Off button turns UPS output OFF and disables Bypass output
- Built-in Emergency Power Off (EPO) dry-contact interface supports remote emergency shutdown in large facilities

# Specifications

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| **General Info** | |
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| **OUTPUT** | |
| Output Capacity Details | One open power module slot enables installation of up to one additional 20kVA power module for increased capacity to 120kVA (authorized technician required) |
| Output Volt Amp Capacity (VA) | 100000 |
| Output kVA Capacity (kVA) | 100 |
| Output Watt Capacity (Watts) | 80000 |
| Output kW Capacity (kW) | 80 |
| Power Factor | 0.8 |
| Crest Factor | 3:1 |
| Nominal Output Voltage(s) Supported | 220/380V; 230/400V; 240/415V; 3-Phase Wye |
| Nominal Voltage Details | Less than 3% output THD |
| Frequency Compatibility | 50 / 60 Hz |
| Output Voltage Regulation (Line Mode) | +/- 1% |
| Output Voltage Regulation (Battery Mode) | +/- 1% |
| Output Receptacles | Hardwire |

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| Output AC Waveform (AC Mode) | Pure Sine wave |
| Output AC Waveform (Battery Mode) | Pure Sine wave |
| **INPUT** | |
| Rated input current (Maximum Load) | 129A (220/380), 123A (230/400), 116A (240/415) |
| Nominal Input Voltage(s) Supported | 220/380V (3ph wye); 230/400V (3ph wye); 240/415V (3ph wye) |
| Nominal Input Voltage Description | 3-Phase Wye, 4 wire (L1, L2, L3, N, G); Less than 4% input harmonic distortion (THDi) |
| UPS Input Connection Type | Hardwire |
| Input Phase | 3-Phase |
| **BATTERY** | |
| Expandable Battery Runtime | Battery set sold separate |
| External Battery Pack Compatibility | BP480V103 ; BP480V140 ; BP480V55 ; BP480V78 ; BP480V200 ; BP480V300 ; BP480V400 ; BP480V500 |
| Expandable Runtime Description | External battery pack wiring is contractor supplied |
| DC System Voltage (VDC) | +/- 240VDC |
| Battery Replacement Description | Hot-swappable, replaceable batteries |
| **VOLTAGE REGULATION** | |
| Voltage Regulation Description | Online, double-conversion power conditioning |
| Overvoltage Correction | Maintains continuous operation without using battery power during overvoltages to 276-477 (3-phase, 4-wire, wye), reducing output within 1% of nominal |
| Undervoltage Correction | Maintains continuous operation without using battery power during brownout/undervoltage conditions to 173-300 (3-phase, 4-wire, wye) |
| **USER INTERFACE, ALERTS & CONTROLS** | |
| Switches | ON button turns UPS inverter on. OFF button turns UPS inverter off. LCD Display Control Buttons browse through and select items displayed on LCD screen. EPO (Emergency Power Off) button turns UPS output off and disables Bypass output |
| Alarm Cancel Operation | Power-fail alarm can be silenced using alarm-cancel switch |
| Audible Alarm | Alarms signal a variety of operational conditions: low-battery, overload, shutdown, bypass and more |
| LED Indicators | 4-LED Display: Displays normal AC input, on battery power, bypass input and fault conditions |
| **SURGE / NOISE SUPPRESSION** | |
| UPS AC Suppression Joule Rating | 5960 |
| UPS AC Suppression Response Time | Instantaneous |
| EMI / RFI AC Noise Suppression | Yes |
| **PHYSICAL** | |

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|---|---|
| Installation Form Factors Supported with Included Accessories | Tower |
| Primary Form Factor | Tower |
| UPS Power Module Dimensions (hwd, in.) | 66.8 x 20.5 x 38.4 |
| UPS Power Module Dimensions (hwd, cm) | 169.7 x 52.1 x 97.5 |
| UPS Power Module Weight (lbs.) | 766.4 |
| UPS Power Module Weight (kg) | 347.5 |
| UPS Shipping Dimensions (hwd / in.) | 76.1 x 28.5 x 48.2 |
| UPS Shipping Dimensions (hwd / cm) | 193.3 x 193.3 x 122.4 |
| Shipping Weight (lbs.) | 766.4 |
| Shipping Weight (kg) | 347.5 |
| Cooling Method | Fans |
| UPS Housing Material | Steel |
| **ENVIRONMENTAL** | |
| Operating Temperature Range | +32 to +104 degrees Fahrenheit / 0 to +40 degrees Celsius |
| Storage Temperature Range | +5 to +122 degrees Fahrenheit / -15 to +50 degrees Celsius |
| Relative Humidity | 0 to 95%, non-condensing |
| AC Mode BTU / Hr. (Full Load) | 17400 |
| **COMMUNICATIONS** | |
| Communications Interface | DB9 Serial; Slot for SNMP/Web interface |
| PowerAlert Software | Included |
| Communications Cable | DB9 cabling included |
| **LINE / BATTERY TRANSFER** | |
| Transfer Time | No transfer time (0 ms.) in online, double-conversion mode |
| Low Voltage Transfer to Battery Power (Setpoint) | Maintains continuous operation without using battery power during brownout/undervoltage conditions to 173-300V AC (3-phase, 4-wire, wye). Below this point, output is maintained utilizing reserve battery power |
| High Voltage Transfer to Battery Power (Setpoint) | Maintains continuous operation without using battery power during overvoltages to 276-477V AC (3-phase, 4-wire, wye), reducing output within 1% of nominal. Above this point, output is maintained utilizing reserve battery power |
| **SPECIAL FEATURES** | |
| Cold Start (Startup in Battery Mode During a Power Failure) | Cold-start operation supported |
| High Availability UPS Features | Automatic inverter bypass; Hot swappable batteries |
| Green Energy-Saving Features | High efficiency economy mode operation; Schedulable daily hours of economy mode operation |

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| **CERTIFICATIONS** | |
| UPS Certifications | CE; ROHS (Restriction of Hazardous Substances) |
| **WARRANTY** | |
| Product Warranty Period (International) | 2-year limited warranty |
| Product Warranty Period (Mexico) | 2-year limited warranty |
| Product Warranty Period (Puerto Rico) | 2-year limited warranty |

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